Listing of Claims

1. (Currently Amended)   An apparatus for generating images ~~of a human or animal body~~ a subject on the basis of 3D-constructions from 3D-XRAY or 3D-Computer Tomography measurements, which ~~bodies~~ subject comprises both natural tissue and one or more high-density objects, said apparatus comprising a measuring facility for executing said measurements, a distinguishing facility for distinguishing said one or more high-density objects and executing a separating procedure thereon for generating an ~~improved~~ image of regions of said natural tissue,

said apparatus being ~~characterized by~~comprising:

a ramp-filtering facility for applying a ramp filter in the direction of rotation to such various projection measurements and a back-projecting facility fed by said ramp-filtering facility for back-projecting the various so filtered projections into a 3D-volume reconstruction ~~(Figure 2b)~~;

a segmenting facility fed by said back-projecting facility for in said 3D-volume reconstruction segmenting said one or more high-density objects by a thresholding procedure and a forward projecting facility fed by said segmenting facility for executing a forward projection of the shadow(s) of the segmented one or more high-density objects onto the ramp-filtered projection ~~(Figure 2c)~~, whilst marking the borders of said one or more high density objects in the ramp-filtered back-projections;

a suppressing facility fed by said forward projecting facility for suppressing said reconstructed one or more high-density objects from the original projection measurementsand said suppressing facility is operative for executing an appropriate substitution of gray values derived from a physical neighbourhood of said one or more high-density objects instead of said one or more high-density objects in question. ~~(Figure 2d)~~;

and a retro-coupling facility fed by said suppressing facility for executing a back-projection of the various filtered projections with corrected profiles through exclusion of said suppressed one or more high-density objects and outputting a reconstruction result ~~(Figure 2e)~~.

2. (Original)   An apparatus as claimed in Claim 1, and furthermore comprising a superimposing facility fed by said forward projecting facility for receiving said one or more high-density objects for superimposing thereof onto said reconstruction result.

3. (Original)   An apparatus as claimed in Claim 1, and comprising adapting means for relatively adapting the gray values of said one or more high-density objects and said natural tissue in a predetermined gray value range to show both of them at the same time.

4. (Currently Amended)   A method ~~for using an apparatus as claimed in Claim 1,~~ ~~for~~ of generating images of a human or animal body on the basis of 3D-constructions from 3D-XRAY or 3D-Computer Tomography measurements, which bodies comprise both natural tissue and one or more high-density objects, said method comprising the steps of executing said measurements, distinguishing said one or more high-density objects and executing a separating procedure thereon for generating an improved image of regions of said natural tissue,

said method being characterized by comprising the steps of:

applying a ramp filter in the direction of rotation to such various projection measurements and back-projecting the various filtered projections into a 3D-volume reconstruction ~~(Figure 2b)~~;

in said 3D-volume reconstruction segmenting said one or more high-density objects by a thresholding procedure and executing a forward projection of the shadow(s) of the segmented one or more high-density objects onto the ramp-filtered projection ~~(Figure 2c)~~, thus marking the borders of said one or more high density objects in the ramp-filtered back-projections;

suppressing said reconstructed one or more high-density objects from the original projection measurements whilst executing an appropriate substitution of gray values derived from a physical neighbourhood of said one or more high-density objects instead of said one or more high-density objects in question. ~~(Figure 2d)~~;

and secondarily executing a back-projection of the various filtered projections with corrected profiles and thereby without said suppressed one or more high-density objects ~~(Figure 2e)~~.

5. (Currently Amended)   A computer readable medium containing instructions for controlling a computer system to perform the steps of ~~A computer program comprising instructions for executing the method steps as claimed in Claim 4 through controlling an apparatus as claimed in Claim 1.~~ a method of generating images of a subject on the basis of 3D-constructions from 3D-XRAY or 3D-Computer Tomography measurements, which subject comprises both natural tissue and one or more high-density objects, said method comprising the steps of executing said measurements, distinguishing said one or more high-density objects and executing a separating procedure thereon for generating an improved image of regions of said natural tissue,

        said method comprising the steps of:

        applying a ramp filter in the direction of rotation to such various projection measurements and back-projecting the various filtered projections into a 3D-volume reconstruction;

        in said 3D-volume reconstruction segmenting said one or more high-density objects by a thresholding procedure and executing a forward projection of the shadow(s) of the segmented one or more high-density objects onto the ramp-filtered projection, thus marking the borders of said one or more high density objects in the ramp-filtered back-projections;

        suppressing said reconstructed one or more high-density objects from the original projection measurements whilst executing an appropriate substitution of gray values derived from a physical neighbourhood of said one or more high-density objects instead of said one or more high-density objects in question;

        and secondarily executing a back-projection of the various filtered projections with corrected profiles and thereby without said suppressed one or more high-density objects.

6. (Cancelled)   A computer program product being embedded in a machine read-only tangible medium and containing instructions for executing the method steps as claimed in Claim 5 through controlling an apparatus as claimed in Claim 1.